

1 **Amendment to the Claims**

2 **In the Claims:**

3 Please cancel Claims 2-46.

4 1. (Original) A system for obtaining at least one output signal corresponding to at least
5 one image of an object that is formed along an inclined focal plane passing through the object,
6 wherein there is relative motion between the object and the system, comprising:

7 (a) a time delay integration (TDI) detector disposed to receive light from the
8 object along an imaging path, forming said at least one image of the object on a plane of said
9 TDI detector that is inclined at an angle relative to the imaging path, so that the plane of the TDI
10 detector is not perpendicular to the imaging path, said angle determining an angle of the inclined
11 focal plane; and

12 (b) an optical element disposed between the object and the TDI detector and
13 oriented so that light traveling from the object is directed along the imaging path to form said at
14 least one image of the object on the plane of the TDI detector, in response thereto, said TDI
15 detector producing one of:

16 (i) an output signal corresponding to an image of the object relative to
17 the inclined focal plane, said output signal being a composite of the light from the object at
18 differing focal positions within the object, taken along the inclined focal plane, and being
19 indicative of at least one characteristic of the object at the differing focal positions; and

20 (ii) a plurality of output signals, each output signal corresponding to an
21 image of the object formed on the plane of the TDI detector relative to a different focal position
22 along the inclined focal plane, said plurality of output signals being indicative of at least one
23 characteristic of the object at different focal positions within the object, along the inclined focal
24 plane.

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